

Amendment to the Claims

Please amend the pending claims as indicated below. The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (Withdrawn) An isolated and purified peptide comprising from 9 to about 50 amino acid residues and having an amino acid residue sequence that is selected from the group consisting of SEQ ID Nos: 4, 5, 6, and 7, having activity that inhibits platelet aggregation.

2. (Withdrawn) The peptide of claim 1 comprising the amino acid residue sequence of any of SEQ ID NOS:5-7.

3. (Withdrawn) The peptide of claim 2 consisting of any of SEQ ID NOS:5-7.

4. (Withdrawn) The peptide of claim 2 consisting essentially of any of SEQ ID NOS:5-7.

5. (**Currently amended**) An antibody that specifically immunoreacts with integrin $\alpha_{IIb}\beta_3$ and comprises heavy chain CDR1 sequence of "Ser-Tyr-Ala-Met-His", CDR2 sequence of "Ala-Ile-Gly-Thr-Gly-Gly-Gly-Thr-Tyr-Tyr-Ala-Asp-Ser-Val-Lys-Gly", and CDR3 ~~an amino acid residue sequence~~ selected from the group consisting of SEQ ID Nos: 8, 25, 26, 27, 28, 29, 30, and 31,

~~wherein the amino acid residue sequence is within a complementarity determining region of the antibody.~~

6-7. **(Canceled)**

8. (Previously presented) The antibody of claim 5 having immunoreactivity with integrin $\alpha_{IIb}\beta_3$ wherein the antibody has a dissociation constant (K_d) from between 10^{-8} M and 10^{-11} M.

9. (Original) The antibody of claim 5 that is a human antibody.

10. (Original) An antibody having the immunoreactivity of the antibody of claim 8.

11. (Withdrawn) A method of inhibiting platelet aggregation comprising contacting platelets with an effective inhibitory amount of the peptide of claim 1.

12. (Withdrawn) A method of inhibiting platelet aggregation comprising contacting platelets with an effective inhibitory amount of the antibody of claim 5.

13. (Withdrawn) A method of inhibiting binding of fibrinogen to platelets comprising contacting the platelets with an effective inhibitory amount of the peptide of claim 1.

14. (Withdrawn) A method of inhibiting platelet aggregation comprising contacting platelets with an effective inhibitory amount of the antibody of claim 5.

15. (**Currently amended**) An antibody having integrin $\alpha_{IIb}\beta_3$ -binding activity, wherein the binding competes with integrin $\alpha_{IIb}\beta_3$ -binding activity of the antibody of claim 5, ~~another protein, the other protein comprising an amino acid residue sequence of the tripeptide motif Arg-Ala-Asp (RAD) and wherein~~ the binding is performed in a standard competition assay.

16. (**Canceled**)

17. (Withdrawn) An isolated and purified polynucleotide encoding a peptide comprising from 9 to about 50 amino acid residues and having an amino acid residue sequence that is selected from the group consisting of SEQ ID Nos: 4, 5, 6, and 7 the peptide having activity that inhibits platelet aggregation.

18. (Withdrawn) A vector comprising the polynucleotide of claim 17.

19. (Withdrawn) A host cell comprising the vector of claim 18.

20. (Withdrawn) A method for using a polynucleotide to produce a protein, the method comprising:

a) culturing the host cell of claim 19 under conditions for protein expression; and

b) recovering the protein comprising the amino acid sequence selected from the group consisting of SEQ ID Nos: 4, 5, 6, and 7 from the host cell culture.

21. (Withdrawn) A pharmaceutical composition comprising the peptide of claim 1 and a suitable pharmaceutical carrier in a form suitable for administration intravenously, intra-arterially, into the lymphatic circulation, intraperitoneally, transdermally, subcutaneously, intramuscularly, into the joint space, or by pulmonary administration.

22. (Original) A pharmaceutical composition comprising the antibody of claim 5 and a suitable pharmaceutical carrier in a form suitable for administration intravenously, intra-arterially, into the lymphatic circulation, intraperitoneally, transdermally, subcutaneously, intramuscularly, into the joint space, or by pulmonary administration.

23. (Original) A pharmaceutical composition comprising the antibody of claim 15 and a suitable pharmaceutical carrier in a form suitable for administration intravenously, intra-arterially, into the lymphatic circulation, intraperitoneally, transdermally, subcutaneously, intramuscularly, into the joint space, or by pulmonary administration.

24. (Withdrawn) A peptide as claimed in claim 1 for use as a medicament for treatment to prevent thrombosis in conditions selected from the group consisting of pulmonary

embolism, transient ischemic attacks (TIAs), deep vein thrombosis, coronary bypass surgery, and surgery to insert a prosthetic valve or vessel in autologous, non-autologous, or synthetic vessel graft.

25. (Original) An antibody as claimed in claim 5 for use as a medicament for treatment to prevent thrombosis in conditions selected from the group consisting of pulmonary embolism, transient ischemic attacks (TIAs), deep vein thrombosis, coronary bypass surgery, and surgery to insert a prosthetic valve or vessel in autologous, non-autologous or synthetic vessel graft.

26. (Original) An antibody as claimed in claim 15 for use as a medicament for treatment to prevent thrombosis in conditions selected from the group consisting of pulmonary embolism, transient ischemic attacks (TIAs), deep vein thrombosis, coronary bypass surgery, and surgery to insert a prosthetic valve or vessel in autologous, non-autologous, or synthetic vessel graft.

27. (Withdrawn) A peptide as claimed in claim 1 for use as a medicament for treatment to prevent thrombosis in procedure selected from the group consisting of angioplasty procedures performed by balloon, coronary atherectomy, and laser angioplasty.

28. (Original) An antibody as claimed in claim 5 for use as a medicament for treatment to prevent thrombosis in procedure

selected from the group consisting of angioplasty procedures performed by balloon, coronary atherectomy, and laser angioplasty.

29. (Original) An antibody as claimed in claim 15 for use as a medicament for treatment to prevent thrombosis in procedure selected from the group consisting of angioplasty procedures performed by balloon, coronary atherectomy, and laser angioplasty.

30. (Withdrawn) A method of treating a subject to treat or prevent a disorder of thrombus formation, the disorder selected from the group consisting of thrombosis in pulmonary embolism, transient ischemic attacks (TIAs), deep vein thrombosis, coronary bypass surgery, surgery to insert a prosthetic valve or vessel in autologous, non-autologous, or synthetic vessel graft, the method comprising administering to the subject an amount of a peptide as claimed in claim 1 effective to achieve the desired treatment.

31. (Withdrawn) A method of treating a subject to treat or prevent a disorder of thrombus formation, the disorder selected from the group consisting of thrombosis in pulmonary embolism, transient ischemic attacks (TIAs), deep vein thrombosis, coronary bypass surgery, surgery to insert a prosthetic valve or vessel in autologous, non-autologous, or synthetic vessel graft the method comprising administering to

the subject an amount of an antibody as claimed in claim 5 effective to achieve the desired treatment.

32. (Withdrawn) A method of treating a subject to treat or prevent a disorder of thrombus formation, the disorder selected from the group consisting of thrombosis in pulmonary embolism, transient ischemic attacks (TIAs), deep vein thrombosis, coronary bypass surgery, surgery to insert a prosthetic valve or vessel in autologous, non-autologous, or synthetic vessel graft, the method comprising administering to the subject an amount of an antibody as claimed in claim 15 effective to achieve the desired treatment.